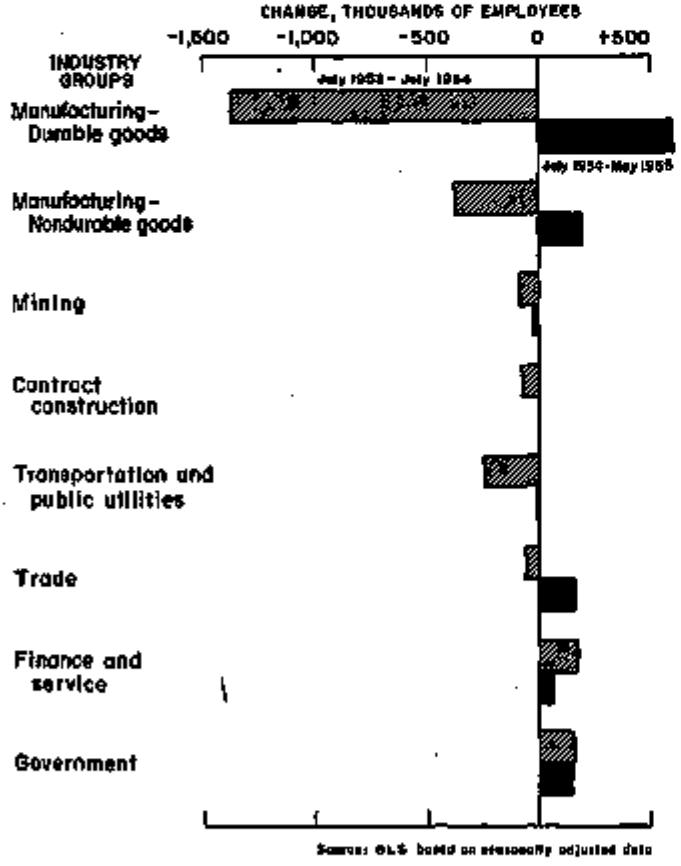
by Edmond L. Kanwit ☆

Patterns of Recent Employment Changes—Area and National

THE DECLINE and subsequent recovery in business activity in the United States after mid-1953 were of moderate proportions for the country as a whole. The character of the business swing was such, however, as to produce fairly pronounced differences in experience among product markets, industries, and areas. Various aspects of this divergence

Changes in the Number of Wage and Salary Employees in Nonagricultural Establishments



in patterns have been reviewed in previous issues of the SURVEY. Extension of this examination to the differential experience of local market areas is made possible by information covering employment in nonagricultural establishments in principal metropolitan areas which is assembled by the Bureaus of Labor Statistics and of Employment Security of the Department of Labor.

Since, nationally, employment changes were heavily concentrated in a few major industrial sectors, it was natural that local areas relying heavily upon these industries for employment tended to have the most volatile employment experience. These national industry trends can be summarized quite quickly.

Total wage and salary employment in nonagricultural establishments, seasonally adjusted, fell from a peak of 49.9 million in July 1953 to a low of 48.0 million in August and September 1954, or by 4 percent. The subsequent advance had brought the seasonally adjusted total back to 49.2 million by May 1955.

The business decline centered in the sharp swing in inventory investment, particularly for durable goods, in the cutback in defense purchases, and in some decline in the demand for consumer and producer durables. Thus, the employment impact was sharpest in the durable-goods manufacturing industries. At its greatest, the reduction there amounted to 1.4 million or 13 percent. Pronounced relative employment reductions were also experienced on the railroads and in coal mining, while nondurable-goods manufacturing and Federal Government civilian employment were less affected. Employment in trade, finance, and service, in contract construction, and in public utilities and transportation, other than the railroads, was little reduced or even increased. State and local government employment advanced steadily.

Largest fluctuation in durable goods centers

The durable-goods manufacturing industries alone experienced an employment decline equal to three-fourths of the reduction in the total, and in the subsequent recovery thus far, these industries have accounted for three-fifths of the increase. It is not surprising, therefore, to find that despite the wide variety of local influences and the presence of numerous exceptions in particular localities, there was a very noticeable tendency in the 1953–55 period for areas heavily dependent upon durable-goods manufacturing to experience the widest fluctuations in total nonagricultural employment.

This is illustrated, for the downward phase of the movement, in the accompanying chart. For the 35 metropolitan areas with the largest 1950 population, this chart relates the July 1953 to July 1954 percentage change in total nonagricultural employment to the percentage that employment in durable-goods manufacturing comprised of total nonagricultural employment as of July 1953. The time period used is as close to that of the maximum national employment decline as could be selected and at the same time avoids comparisons which might be affected by different seasonal influences.

The chart illustrates a substantial variation in employment experience over this period, with changes ranging from a 1-percent increase in Houston to a 14-percent reduction in

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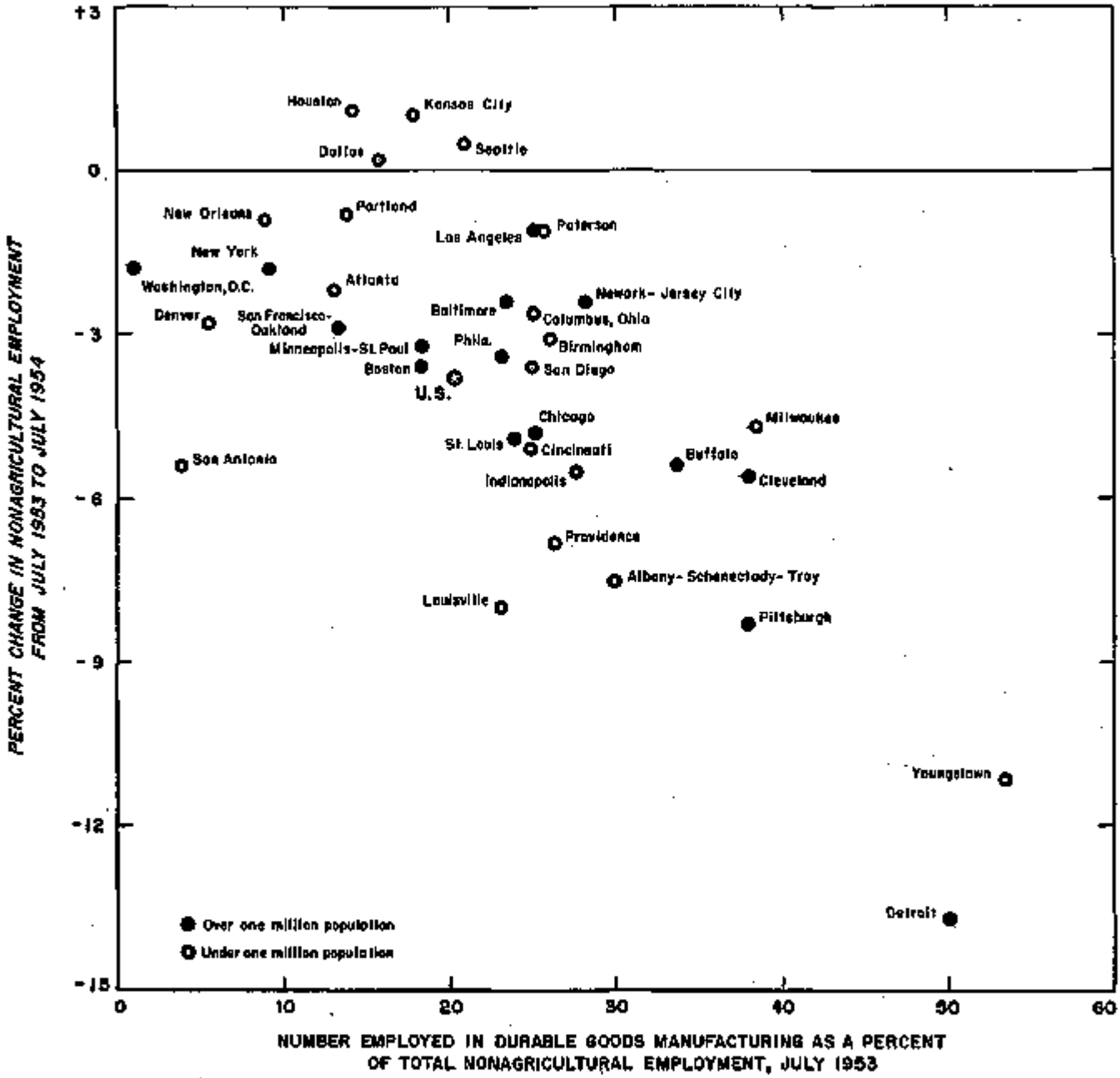
Changes in Nonagricultural Employment, July 1953--July 1954, Related to the Proportion Employed in Durable Goods Manufacturing in 35 Largest U. S. Labor Market Areas



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Detroit. Half of these major areas experienced employment reductions within the narrow range of 2 to 5¼ percent (as compared with a national change of 3.8 percent), with one-fourth showing reductions of more than 5¼ percent and one-fourth reductions of less than 2 percent or actual increases.

Also apparent is the general tendency, already mentioned, for relatively large 1953–54 employment reductions to be associated with some exceptions with a heavy concentration of durable-goods production. Thus, of the one-fourth of the areas with the largest employment reductions, all except Louisville had greater-than-average concentrations of employment in the durable-goods manufacturing industries; 7 of these 9 areas with the sharpest employment declines are also among the fourth of the cities with the highest proportions of employment in durable-goods manufacturing. Among the one-fourth of the 35 areas which experienced the smallest employment declines, all but Los Angeles had less-than-average concentrations of employment in durable-goods manufacturing (although they were not heavily concentrated in the lowest quarter according to the durable goods ranking).

Thus it appears that the relatively unfavorable 1953–54 experience of such major hard goods centers as Detroit and

Pittsburgh, which was widely noted last year, was fairly typical of such areas. Toward the other extreme, employment in the vast New York-Northeastern New Jersey metropolitan area declined only 1.9 percent during the downswing. In the 9-county New York labor market only 9 percent of the nonagricultural wage and salary workers derived their income from durable-goods production in July 1953. This proportion was about the same as that for New Orleans (where employment fell less than 1 percent) and much below those for the remainder of the 35 large areas with the exception of 3 principal centers of Federal employment which are mentioned below.

Fast-growing areas less affected in 1953–54

Numerous areas, nevertheless, deviated from this pattern. One cause of systematic deviation was the long-term growth factor. This may be appraised crudely for the different areas by examination of the percentage change in total nonagricultural employment from 1940 to 1953, shown in the table.

Among the 10 large market areas with the most favorable 1953–54 employment experience, Houston, Portland, Dallas, Seattle, Kansas City, New Orleans, and Los Angeles, had experienced employment expansion since 1940 much above the average, and only Paterson had experienced a 1940–53 increase, well below the median of all the 35 areas. Providence, Youngstown, and Albany-Schenectady-Troy were among the localities that experienced 1953–54 employment losses more than double the national average, all metropolitan areas of relatively slow longer-term growth.

Moreover, some tendency existed for the areas with relatively strong longer-term growth to have had a more favorable 1953–54 employment experience, and for the slower growing cities to have had a less-favorable one, than would be indicated by the importance of durable-goods manufacturing alone. It is apparently for this reason that when account is taken of the degree of concentration of employment in durable-goods manufacturing, there was a pronounced tendency for the local areas with the most favorable 1953–54 employment experience to be concentrated in the rapidly growing Western and Southern regions of the country. Also to be noted is that, among the largest major metropolitan areas, those in which March 1955 employment exceeded that of March 1953—Los Angeles, Atlanta, Houston, Dallas, and Denver—all were in these regions. The only exceptions were two aircraft centers: Columbus, Ohio; and the Nassau-Suffolk subarea.

Data for the smaller metropolitan areas listed in the table also indicate a correspondence between both the importance of durable-goods manufacturing and the extent of 1940–53 employment expansion, on the one hand, and the change in employment experienced from July 1953 to July 1954, on the other. The range of employment experience was greater and substantial deviations from the pattern were more frequent than in the larger, and usually more diversified, population centers.[1]

Influence of other industrial changes

It is apparent, however, that in all size groups other important factors were also at work in determining the employment experience of individual areas. These may be thought of as being of two types.

First, it is clear that a single split between durable-goods manufacturing and all other industries is not adequate to represent the influence of differential employment experience among industries even nationally. Not all durable-goods manufacturing industries were equally affected; employment in aircraft and parts production, for example, in July 1954 was only slightly below July 1953. Actual increases in aircraft employment in Los Angeles, which has one-fourth of the total employment in that industry, and in the Nassau-Suffolk and Paterson sectors of the New York-Northeastern New Jersey area were influential in the favorable employment experience of those two metropolitan areas at that time. Strength of aircraft employment in that period was also a stabilizing element in Wichita, Tulsa, and Hartford. In Rochester, N. Y., about 40 percent of employees are engaged in the instrument and photographic equipment industry, which had a relatively stable employment experience.

Similarly, as already noted, pronounced employment reductions occurred in certain industrial sectors outside of durable-goods manufacturing, although the remaining aggregate of nonagricultural employment was well maintained.

The lowering of Federal Government employment was responsible for nonagricultural employment reductions which approximated the national average in Washington, Denver, and San Antonio (to mention only the larger areas) despite the slight importance of durable-goods manufacturing in these centers of Government employment.

Reduced operations in coal mining were responsible for sharp employment declines in a number of communities, including several in Pennsylvania and West Virginia, and the decline in railroad employment was similarly of importance in particular localities. Among the nondurable-goods manufacturing industries, most of which were fairly stable, employment in textiles was down sharply and had an important impact upon employment in most textile centers.

Wide area divergences in separate industries

The other major cause of pronounced variation in local employment experienced is the simple fact that, for a great variety of reasons, employment changes even within the same industry vary widely among communities. The chart on page 18 illustrates this point.

For four principal manufacturing industries, percentage changes in employment from July 1953 to July 1954, and from July 1954 to March 1955, are shown for the major production centers. Three of the four—steel, automobiles, and textiles—experienced pronounced employment fluctuations nationally during these time intervals, while aircraft employment nationally was down but little in the first period, and somewhat more in the second. It will be noted that the charts terminate with March, the latest date for which the data are available, and hence do not reflect the further improvement which has since taken place in employment nationally since that date.

Since the changes shown on the charts are based on data for single months at the terminations of the periods utilized they are influenced by random factors affecting individual localities in these particular months and may not be entirely representative of the experience of each of the areas shown. In addition, the differential experience of the communities may in part reflect different national production trends for specialized products within the broader industry groups. For example, the maintenance in 1953–54 of steel employment in Wheeling-Steubenville was apparently associated with the strength of demand for oil-country tubular goods.

The range of local market experience shown in the charts is so broad, however, as to make it strikingly clear that differences in employment experience among metropolitan areas were far from resulting exclusively from differences

1. A correlation based on preliminary data, for the 33 largest areas exclusive of Washington, Denver, and San Antonio, which were omitted because of the heavy concentration of Government employment, yielded a coefficient of correlation of 0.69 based on the importance of durable goods alone, and of 0.75 when the secular employment trend was added. For 31 of the next 35 areas (with 4 omitted for special reasons) the corresponding coefficients were 0.53 and 0.70; and for 19 of the 33 smallest areas remaining, they were 0.40 and 0.61. Because of the judgment involved in the selection of the areas and some question as to whether the basic relationship with these factors is linear, the coefficients can be used only as a rough indication of the degree of relationship.

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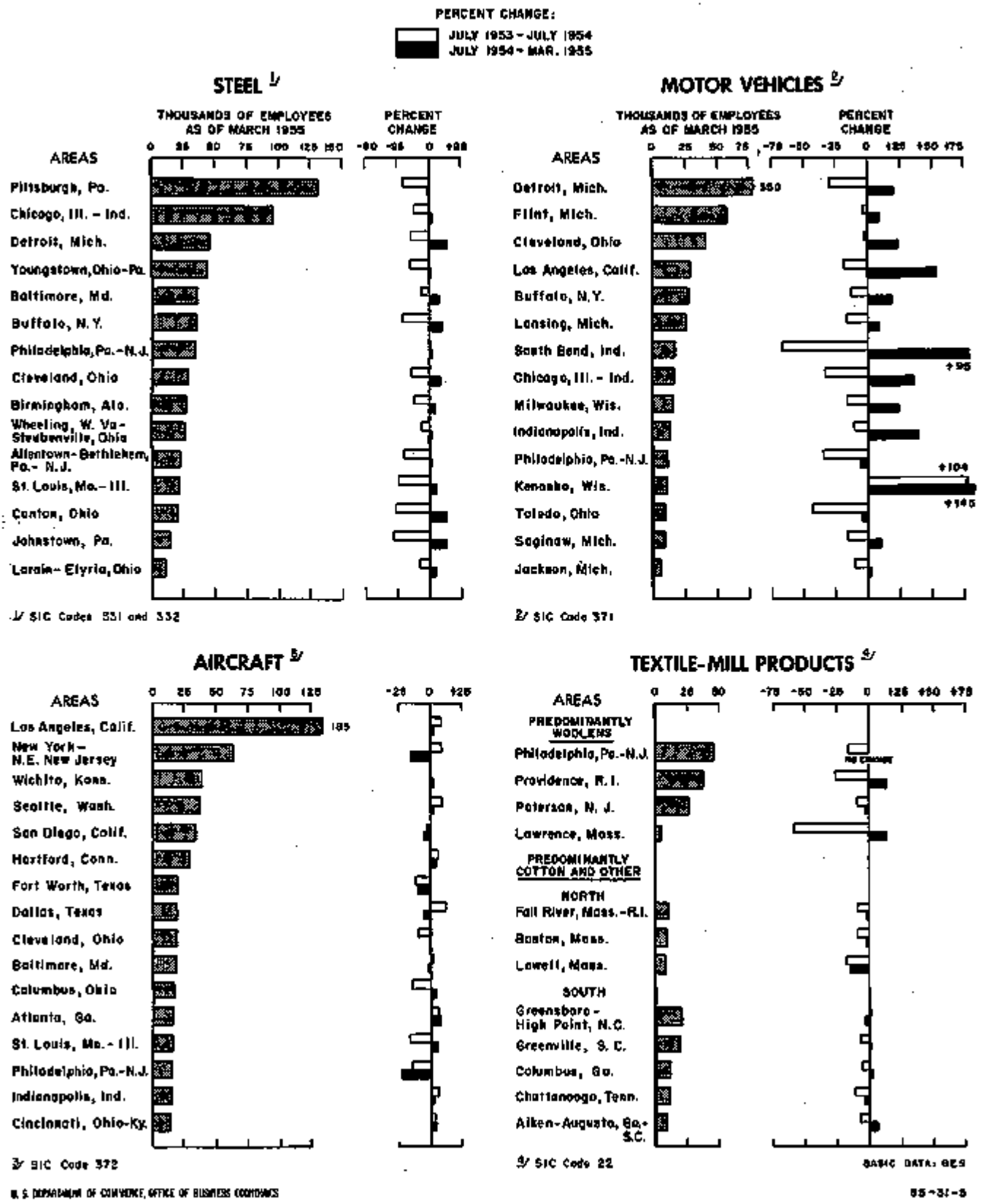
Wage and Salary Employees in Four Manufacturing Industries by Major Production Centers



in the industrial composition of employment in the various areas; factors specifically affecting employment in the individual locality were also of great importance.

Specific illustrations can be readily drawn also from other industries. In electronics, for example, the strength of 1954 employment in Baltimore and Boston, both growing centers of electronics production, contrasted with sharp employment declines in the industry in most other major areas, and was a factor in the maintenance of total employment last year in these areas. But it is unnecessary to belabor the point. It is evident that specific management decisions by both employing organizations and, with respect to order placement, their customers, have a major impact upon local area employment. These decisions arise from a host of considerations; by their nature they defy generalization. Any attempt to trace their relationship to the employment changes experienced by individual communities is beyond the scope of this article.

Wage and Salary Workers in Nonagricultural Industries (except Domestic Service), March–April 1940, March–April 1950, March 1953, 1954, and 1955, for Selected Metropolitan Areas

Standard metropolitan area	Population		Wage and salary workers							Employment of women		Percent change		Employment in durable goods mfg. as	
			Number in thousands					Percent change		Percent of total		1940–55		Percent of total	
	1950 (thous.)	Pers. change	March–April		March 1953	March 1954	March 1955	1940–55 †	July* 1953–54	March 1953–55	April–March 1940	March 1955	Women	Men	July 1953	March 1955
		1940–50	1940	1950												
New York-Northeastern, N. J.[1]	12,042	10.7	3,461	4,037	5,200.6	5,212.8	5,167.6	49	−1.0	−2.5	29.1	32.7	64	36	13.7	12.7
New York Area (BES)[2]	9,500	9.8	2,005	3,343	4,857.0	4,907.0	4,909.2	52	−1.8	−2.2	29.3	33.8	69	41	9.3	8.5
Nassau-Suffolk Counties	940	67.1	150	293	371.6	387.9	394.4	81	6.0	4.7	22.7	32.7	130	79	28.0	27.8
Newark-Jersey City (NJ)	1,951	7.4	620	720	830.2	806.5	787.2	35	−5.5	−5.2	27.3					
Newark (incl. Jersey City) (BES)[3]	1,746		535		772.4	750.0	747.7	57	−2.4	−3.8	28.5	31.2	55	37	28.1	30.3
Paterson (NJ) (BES)[3]	1,040		296		382.4	340.0	345.4	22	−1.1	−4.7	20.4	30.7	27	13	36.7	25.0
Perth Amboy (NJ) (BES)[3]	243		68		107.2	100.0	104.3	66	−5.1	−1.8	20.2	31.1	73	30	33.3	31.8
Chicago (Ill.–Ind.)	6,495	13.9	1,695	2,110	2,566.7	2,454.3	2,447.6	60	−4.8	−4.3	27.6					
Chicago (Ill.–Ind.) (BES)[4]	5,032	12.8	1,492	1,960	2,325.6	2,209.1	2,227.6	57	−4.6	−2.9	27.7	30.5	69	37	25.2	25.0
Los Angeles (Calif.)	4,366	49.8	825	1,397	1,826.8	1,823.3	1,874.3	121	−1.1	2.9	26.8	32.0	173	111	25.2	25.6
Philadelphia (Pa.–N. J.)	3,671	14.7	943	1,238	1,409.2	1,414.4	1,383.2	49	−3.4	−1.1	27.9	31.3	68	42	23.3	20.6
Detroit (Mich.)	3,016	26.0	703	1,073	1,392.3	1,268.6	1,302.0	82	−13.7	−6.5	20.8	27.1	122	57	50.8	48.3
Boston (Mass.)	2,370	8.8		812	966.1	943.5	938.9		−2.6	−3.2						
Boston (Mass.) (BES)[5]			684	793	945.0	920.0	920.4	49	−3.1	−2.7	31.2	30.0	68	35	18.2	16.8
San Francisco-Oakland (Calif.)	2,241	63.3	472	737	860.4	880.4	884.0	90	−2.8	−3.0	25.7	32.0	131	69	13.3	12.0
Pittsburgh (Pa.)	2,213	6.3	502	725	835.8	780.7	773.5	40	−8.3	−7.5	18.8	25.2	75	28	37.3	33.9
St. Louis (Mo.–Ill.)	1,681	17.4	433	684	731.7	709.2	699.3	60	−4.9	−4.4	28.8	31.4	89	52	29.3	21.4
Cleveland (Ohio)	1,466	15.0	390	551	671.2	649.1	640.0	63	−5.6	−4.6	25.9	30.1	86	51	37.6	35.1
Washington (D. C.–Md.–Va.)	1,464	51.2	349	549	620.8	606.9	610.7	81	−1.8	−3.0	31.7	37.6	109	61	1.2	2.3
Baltimore (Md.)	1,337	23.5	350	456	556.7	551.2	548.6	58	−2.4	−1.5	24.3	32.4	105	41	23.5	21.8
Minneapolis-St. Paul (Minn.)	1,117	18.7	278	406	478.6	474.2	469.4	72	−3.2	−1.9	30.7	38.1	99	56	18.4	18.8
Buffalo (N. Y.)	1,089	13.0	270	373	448.0	434.4	427.7	58	−5.4	−4.5	23.5	33.1	78	70	33.6	32.6
Cincinnati (Ohio–Ky.)	904	14.9	220	313	395.7	379.4	373.3	61	−5.1	−3.2	25.2	29.4	75	45	24.8	23.8
Milwaukee (Wis.)	871	18.6	233	340	381.0	363.2	363.6	54	−4.7	−4.6	26.5	29.1	71	67	38.4	36.2
Kansas City (Mo.–Kans.)	814	18.6	203	300	378.8	357.5	353.1	85	1.0	−6.2	28.2	29.4	81	71	17.8	15.0
Houston (Tex.)	807	62.6	167	275	368.3	363.5	319.7	90	1.1	3.7	20.8	28.3	178	94	14.2	12.3
Providence (R. I.–Mass.)	737	8.9	230	301	300.7	278.0	287.5	25	−6.8	−4.4	32.8	39.5	64	5	20.4	27.4
Seattle (Wash.)	733	46.2	150	238	272.6	273.1	270.9	82	0.5	2.7	25.8	35.8	160	62	21.0	21.0
Portland (Oreg.–Wash.)	706	40.8	130	219	238.0	230.0	231.3	75	−6.8	−2.8	26.2	30.1	94	61	13.8	13.4
New Orleans (La.)	685	26.1	151	216	270.8	271.0	264.0	80	−0.8	−2.2	25.4	27.6	93	71	8.0	7.6
Atlanta (Ga.)	672	29.7	147	231	204.8	209.4	206.5	100	−2.2	4.0	27.3	32.9	148	90	18.1	16.1
Dallas (Tex.)	616	34.3	118	225	200.3	202.6	203.1	121	0.2	2.8	23.0	34.4	108	110	15.3	16.2
Louisville (Ky.–Ind.)	677	27.8	139	195	231.3	210.9	223.2	70	−8.8	−3.5	25.1	34.9	125	49	29.1	26.2
Denver (Colo.)	564	38.3	111	184	225.0	225.7	229.5	104	−2.8	L 0	27.8	29.8	107	73	5.6	5.4
Birmingham (Ala.)	559	21.5	119	172	193.0	198.6	189.8	63	−3.1	−1.7	15.9	24.1	128	46	28.1	25.9
San Diego (Calif.)	557	92.4	80	133	184.5	179.8	174.7	132	−3.0	−5.3	20.0	32.4	258	86	26.0	24.2
Indianapolis (Ind.)	552	19.7	148	205	231.7	200.9	220.1	93	−5.3	−4.1	27.6	31.7	116	74	27.6	24.9
Youngstown (Ohio–Pa.)	529	11.0	122	177	196.8	183.5	183.1	66	−11.1	−7.0	18.5	20.7	140	29	43.4	47.7
Albany-Schenectady-Troy (N. Y.)	516	10.5	141	184	221.4	209.8	197.3	35	−7.5	−10.9	29.0	30.5	48	37	20.9	20.8
Columbus (Ohio)	503	20.5	114	175	227.0	227.0	232.2	103	−2.0	2.3	29.0	35.4	105	89	25.1	21.7
San Antonio (Tex.)	500	48.0	87	132	162.7	160.3	153.0	57	−5.4	−5.4	21.2	32.7	173	61	8.8	4.0
Miami (Fla.)	495	84.9	78	156	203.3	210.0	234.0	198	9.2	15.6	25.6	32.7	282	179	4.3	4.3
Rochester (N. Y.)	488	11.3	130	179	209.7	212.0	209.7	54	−2.0	0	30.7	35.1	73	42	41.0	39.4
Memphis (Tenn.)	483	34.7	98	157	173.0	169.2	165.6	70	−4.3	−4.1	24.1	30.3	112	56	11.1	12.1
Dayton (Ohio)	457	28.0	99	160	200.0	202.0	205.0	106	−2.0	0	24.3	28.9	147	86	36.0	35.6
San Bernardino (Calif.)	452	69.4	53	104	129.7	131.0	132.0	145	−0.8	1.8	31.4	30.0	200	131	14.3	14.5
Norfolk-Portsmouth (Va.)	446	72.3	81	110	140.0	144.0	144.2	84	−4.6	−3.0	16.1	31.7	246	45	18.7	16.5
Allentown-Bethlehem-Easton (Pa.–N. J.)	438	18.4	119	167	170.1	167.7	168.4	46	−5.3	−4.4	27.0	30.2	68	35	30.1	31.2
Akron (Ohio)	410	20.6	90	142	178.4	167.9	165.2	86	−7.7	−7.4	22.7	29.3	122	68	15.6	16.6
Tampa-St. Petersburg (Fla.)	409	50.4	65	109	123.3	123.8	122.7	82	2.8	7.3	27.2	34.7	163	84	2.9	3.7
Springfield-Holyoke (Mass.) (BES)[6]	407	11.7	127		165.3	149.7	155.4	36	−6.3	−6.0	30.0	33.0	35	17	20.8	24.0
Toledo (Ohio) (BES)[7]	394	14.9	100	143	168.7	163.0	158.0	60	−0.7	−3.1	29.0	29.4	95	46	30.6	28.1
Wilkes-Barre-Hazleton (Pa.)	302	−11.2	201	124	118.3	116.2	109.0	17	−9.7	−8.2	22.3	43.6	105	−21	5.4	5.3
Omaha (Nebr.–Iowa)	368	12.7	85	125	141.8	142.0	141.1	64	−1.2	−0.5	27.3	34.6	107	47	5.0	3.7
Fort Worth (Texas)	361	60.2	80	125	151.2	151.4	166.4	153	7.0	3.4	20.2	20.4	160	155	22.4	20.8
Hartford (Conn.) (BES)[8]	358	21.1	100	150	198.7	196.6	195.7	85	−1.1	L 0	30.4	35.0	128	60	33.4	32.7
Wheeling-Steubenville (W. Va.–Ohio)	354	−2.5	91	110	112.9	108.4	100.5	25	−4.3	−3.1	19.9	34.1	46	14	40.9	41.5
Syracuse (N. Y.)	342	16.8	84	120	144.6	141.1	138.0	72	−7.0	−5.8	26.9	31.0	87	53	34.7	31.9
Knoxville (Tenn.)	337	37.0	90	98	114.0	115.6	117.8	99	3.9	4.3	26.2	27.0	107	92	13.3	12.7
Phoenix (Ariz.)	332	76.2	33	79	96.0	99.7	104.5	196	1.2	6.0	24.6	30.8	202	188	11.5	11.9
Richmond (Va.)	328	24.7	80	123	140.5	143.7	140.2	65	−2.1	−0.2	30.4	34.3	80	55	5.4	5.6
Oklahoma City (Okla.)	325	33.3	64	111	139.2	134.2	134.5	113	−2.3	−2.7	27.0	29.9	135	104	4.8	4.6
Charleston (W. Va.)	322	10.0	70	93	96.8	91.6	80.7	39	−8.5	−10.4	15.0	23.9	91	12	9.0	9.2
Nashville (Tenn.)	322	20.1	70	108	124.4	121.8	124.4	77	−2.8	0	28.3	35.4	132	88	10.0	8.8
Jacksonville (Fla.)	304	44.7	68	98	111.2	113.2	115.9	91	5.1	4.2	22.7	31.3	174	77	5.1	4.3
Harrisburg (Pa.)	292	15.0	73	102	127.0	128.7	120.2	88	−6.4	−5.7	27.6	35.0	113	51	14.1	10.9
Johnstown (Pa.)	201	−2.4	71	80	81.1	74.6	72.2	14	−14.3	−11.0	14.4	23.8	62	−9	27.5	23.2
San José (Calif.)	290	88.1	30	76	94.0	87.9	94.0	116	5.5	14.2	28.5	31.7	193	129	14.3	16.5

Wage and Salary Workers in Nonagricultural Industries (except Domestic Service), March–April 1940, March–April 1950, March 1953–1954, and 1955, for Selected Metropolitan Areas—Continued

Standard metropolitan areas	Population		Wage and salary workers							Employment of women		Percent change		Employment in durable goods mfg. as	
			Number in thousands					Percent change						Percent of total	
	1950 (thous.)	Perc. change 1940–50	March–April		March 1953	March 1954	March 1955	1940–53 †	July ¹ 1953–54	March 1953–55	April–March 1940	March 1955	1940–55		July 1953	March 1955
			1940	1950									Women	Men		
Grand Rapids (Mich.)	288	17.0	97	97	107.0	104.5	108.3	66	−3.0	1.2	26.0	32.1	103	48	41.4	41.0
Utica-Rome (N. Y.)	284	8.0	73	87	97.2	94.7	92.1	34	−5.7	−5.3	30.5	35.3	52	15	31.0	32.4
Canton (Ohio)	283	20.4	95	90	120.0	112.1	115.4	93	−11.0	−6.4	20.4	27.4	126	61	48.7	46.3
Sacramento (Calif.)	277	63.7	47	88	112.2	110.4	114.0	137	0.8	2.1	27.3	32.2	186	126	3.1	2.4
Fresno (Calif.)	276	54.9	33	60	60.3	63.6	67.7	102	0.0	1.3	24.0	32.4	105	84	8.2	8.7
Worcester (Mass.) (BES)²	276	9.2	90	.....	106.2	104.7	103.7	34	−2.6	−2.4	29.2	34.1	67	20	35.0	32.5
Tacoma (Wash.)	276	31.5	60	69	71.7	68.3	69.6	44	−3.2	−2.9	18.3	30.5	133	19	14.5	14.1
Salt Lake City (Utah)	276	29.0	66	86	103.0	102.0	107.6	80	0.1	2.6	24.2	27.1	110	86	8.5	7.7
Flint (Mich.)	271	15.9	65	90	113.2	110.0	120.5	72	2.8	10.3	19.9	24.1	123	93	62.0	66.6
Wilmington (Del.) (BES)³	268	21.0	57	89	102.8	96.9	97.5	81	−4.1	4.8	23.9	28.1	103	63	17.7	14.9
New Haven (Conn.) (BES)³	266	0.9	95	98	118.0	117.4	117.4	25	−2.5	−1.0	30.3	35.2	48	13	26.2	24.8
Bridgeport (Conn.) (BES)³	268	23.4	79	94	124.1	117.1	115.3	56	−6.2	−7.2	30.3	32.0	54	60	42.6	47.6
Scranton (Pa.)	267	−14.0	68	62	82.5	82.4	78.9	23	−9.5	−5.6	27.1	37.3	90	0	12.0	11.3
Reading (Pa.)	256	5.7	70	97	100.0	98.4	93.4	32	−2.5	−6.6	31.2	34.0	37	17	25.8	23.3
Duluth-Superior (Minn.-Wis.) (BES)³	253	−0.5	56	51	50.5	49.0	48.4	−9	−3.1	−4.2	23.4	34.5	28	−25	14.2	14.5
Tulsa (Okla.)	252	30.2	51	82	112.5	110.9	119.2	123	−1.3	5.9	25.0	28.2	104	124	10.4	10.3
Des Moines (Iowa)	228	15.4	55	83	91.0	89.0	93.6	65	1.6	2.9	30.4	30.0	104	55	11.3	14.7
Trenton (N. J.)	230	16.8	62	85	128.0	122.6	123.0	103	−0.8	−3.1	30.3	32.2	109	92	31.5	29.6
Wichita (Kansas)	222	55.1	58	75	128.8	114.0	117.5	319	−1.3	−1.8	27.4	32.2	207	102	37.7	37.2
Charlotte (N. C.)	197	29.8	60	70	83.6	82.0	83.0	61	−1.7	−0.7	28.1	41.8	163	47	6.0	4.8
Mobile (Ala.)	231	53.8	70	60	78.3	77.4	79.4	128	−8.2	1.4	18.4	30.7	235	108	7.8	7.4
Spokane (Wash.)	232	34.8	44	65	68.1	66.3	68.6	70	−2.2	−1.9	25.6	30.5	83	43	12.6	14.2
South Bend (Ind.)	205	20.7	60	77	90.0	83.5	84.9	67	−23.8	−11.5	25.6	28.5	110	78	46.2	43.2
Little Rock-N. Little Rock (Ark.)	197	20.0	36	61	68.3	65.0	67.9	88	−5.0	−0.5	25.7	32.4	138	70	8.8	9.7
Beaumont-Port Arthur (Tex.)	195	24.2	39	53	67.4	66.5	68.5	72	4.5	1.8	16.8	22.3	140	61	7.5	8.4
Fort Wayne (Ind.)	184	16.5	44	53	61.8	74.2	72.7	55	−11.8	−11.0	28.1	33.6	90	52	39.6	39.9
Evansville (Ind.)	169	22.7	37	55	63.2	68.7	68.4	122	−14.8	−12.3	25.1	29.6	108	74	48.1	47.7
Winston-Salem (N. C.)	148	15.5	36	51	60.6	60.5	61.3	67	3.8	3.0	35.4	38.8	77	−2	14.2	14.
Albuquerque (N. Mex.)	146	109.0	34	39	53.7	52.4	56.4	276	−1.6	8.0	26.1	28.1	282	272	11.4	14.6
Fall River (Mass.)	137	1.6	46	51	49.9	48.1	47.7	0	−0.4	−4.4	40.9	48.6	10	−5	2.0	2.7
Lawrence (Mass.)	128	0.0	44	49	49.0	34.4	34.2	−30	−14.8	−14.5	35.8	35.9	−23	−23	9.4	9.1

¹Data for July 1953–July 1954 adjusted for industrial disputes involving 1,000 or more workers.

†Percentages calculated before 1940 and 1950 data were rounded.

1. *New York-Northeastern New Jersey*, a standard metropolitan area, is not reported currently by BLS or BES. The 4 labor markets which report to BES, however, substantially cover the area, notably within 50 thousand workers, or 1 percent. Population is shown for the entire SMA, for the 9-county area comprising the *New York labor market area* as reported by BES, and for the *Newark-Jersey City sub-area* comprising Hudson, Essex and Union counties as reported by BLS. Other data for the huge 13 million population SMA represent a weighted 4-labor market area summary. Data on the employment of women in March 1955 for New York City were not available and were estimated by the Office of Business Economics on the basis of their proportion in nonagricultural employment in the 1950 census.

2. The areas so noted are labor market areas as defined by BES and differ from the SMA. Data on population are generally given on SMA basis because of its ready availability for 1955. Differences in area definition are described below:

In the *New Haven* area, under both BES and BLS reporting, 4 towns are included in addition to the 8 towns comprising the SMA: Bethany, Guilford, Madison and North Branford. The *Hartford* area includes not only the SMA but also Canton, East Granby, Granby, and Bolton.

The *Bridgeport* area adds to the SMA the towns of Easton and Monroe.

The *Springfield-Holyoke* SMA and *Boston* SMA are very different from the labor market areas as reported. Brockton is considered a separate labor market.

The *Wilmington* area, Delaware, excludes Salem county, N. J., a part of the SMA.

The *Chicago* labor market area includes Cook and DuPage counties, Illinois, and Lake County, Indiana. The SMA, considerably larger in area, comprises 4 additional Illinois counties.

The *Duluth-Superior* labor market includes the city of Duluth and Douglas county, Wisconsin, but excludes the remainder of St. Louis county, Minnesota.

The Toledo labor market area includes not only Lucas county (the SMA), but also the industrial townships of Ross and Rossford in Wood county.

NOTE.—Precise definitions of labor market areas are contained in the Directory of Important Labor Market Areas, 4th Edition July 1954, U. S. Department of Labor; standard metropolitan areas are defined in the list of SMA's published by the Bureau of the Budget, 1951 and revisions.

Sources: U. S. Department of Commerce, Bureau of the Census (1940 and 1950) and Office of Business Economics; U. S. Department of Labor, Bureau of Employment Security and Bureau of Labor Statistics (1953–55).

Technical Notes

To indicate more fully the diversity of employment experience among localities, data have been assembled in the table for all labor market areas with a population of 275,000 or more in 1950, and 23 additional smaller areas. Some of the latter have been included in order to provide fuller geographic coverage in the South, and some are illustrative of special situations—such as Fall River and Lawrence where the decline in textile activity has created an oversupply of labor for many years.

The 1950 population, and total nonagricultural employment as of the March–April census enumeration periods of 1940 and 1950 and as of March of 1953, 1954, and 1955 are shown for each area, as is the importance of employment in durable goods manufacturing in March of 1953 and 1955. In addition, the proportion of female employment and the percentage changes in male and female employment are shown for selected dates. Although not utilized in the discussion of recent employment changes, the latter figures are of interest inasmuch as they show wide differences among areas both in the proportion of women among nonagricultural wage and salary workers and in employment trends for males and females. Especially noticeable are the sizeable increases which have occurred in female employment generally and also in a number of areas where male employment has shown little expansion or actually declined since 1940.

The data for the 35 labor market areas, which are based upon Bureau of Labor Statistics and Bureau of Employment Security reports for 1953–55 and Bureau of Census data for 1940 and 1950, have been made as comparable as possible by adjustment of the earlier figures.

The United States Census of population of 1950 based the definitions of standard metropolitan areas upon the inclusion of stated counties. The two exceptions to this rule were in densely populated New England where area centers were established by towns, and in Virginia where large cities are independent and outside of county boundaries.

The standard metropolitan area as defined in the 1950 Census was quite different from the concept of the metropolitan district utilized in the 1940 Census, which was based upon population density. The standard metropolitan area is similar to the industrial areas used by the 1939 and 1947 Censuses of Manufactures.

It was necessary to convert the Census data to a comparable basis in geographic coverage. By so doing comparable employment data were developed for the census periods of 1940 and 1950 which would tie in with the present area reporting of wage and salary employment by the BLS metropolitan area and BES labor market area reporting programs.

Method of conversion

In the Census of 1940, the total number of wage and salary workers was given for each county and city in the United States, for the larger towns in New England, and for the townships and boroughs of New Jersey. From this class-of-worker group, two subtractions were made—domestic service workers, and farm laborers and farm foremen. Estimates for geographic subdivisions for which class-of-worker data were not available were made by applying the ratio of nonagricultural wage and salary workers to the population of the subdivision in proportion to that of the appropriate county. These data were then combined into SMA or BES labor market areas.

For 1950, Census data on a standard metropolitan area basis greatly facilitated the operation. For that year the total number of wage and salary workers was obtained by adding Government wage and salary workers to those employed in private industries, and then private household workers (as they were renamed in 1950) and farm laborers, (except unpaid family workers), and farm foremen were removed from the total as in 1940.

Data subsequent to 1950 were obtained where available from the Bureau of Labor Statistics, which covers about one-fourth of the areas, and from the Bureau of Employment Security for the remaining areas. Care was taken to see that the data were revised to the most current available benchmarks from unemployment compensation data.

In order to tie into current area employment series in those cases where BES labor market areas differ from the standard metropolitan area, mainly in New England and New Jersey, conversion was also made to the BES labor market area basis. This was particularly desirable because the breakdown of employment by sex is available only from BES data.

Differences in concept

In the data presented in this article, census estimates obtained by the enumeration of individuals are made consistent, as far as possible, with the BES-BLS establishment or payroll series. Although conceptual differences between these two series are not considered significant enough seriously to impair the comparisons of employment changes by areas, they should nevertheless be mentioned. These conceptual differences are:

(1) Data are by residence of the employee in the Population census and by location of establishment in the payroll series. These are not generally inconsistent by area if the standard metropolitan area is sufficiently broad in geographical coverage to include the general commuting areas from which the labor supply is drawn. In some densely populated areas in New England, it appears that some, but relatively slight, interarea commuting occurs. Under such circumstances discrete labor markets are difficult to define. This problem, however, is seldom present elsewhere.

In some cases suburban growth has outstripped the current metropolitan area definition, or the area was perhaps too restricted to begin with. For example, the Indianapolis, Trenton, and Evansville areas in the table show employment gains which have far outstripped the indicated population rise over the intercensal decade. In this respect the tabulation may be helpful in reconsidering the area definition.

(2) In census data, a worker is listed only by his primary occupational or industry attachment. BES-BLS establishment data, on the other hand, include all payroll entries for multiple jobholders. It is not likely that trends in multiple job holding, particularly over a short-range period, would be enough to produce any important bias in the comparison of area employment changes, although it should be recognized that this factor makes comparisons of the 1940 and 1950 Census with the 1953–55 establishment data somewhat inexact.

(3) Census data do not include any employed youth under 14 years of age. The payroll series include all persons receiving wages regardless of age, but in the nonagricultural industries with which this study is concerned, this difference has a negligible effect.

(4) In the Census series, wage and salary workers in nonagricultural industries include those "employed but not at work" during the census period of enumeration. Establishments report persons "employed but not at work" which include only those receiving pay as on paid vacations or paid leave for sickness or other causes. It is not likely that this difference would affect significantly the trend in any of the periods covered. Employment data are shown only for identical months so as to avoid possible seasonal distortions.